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MEMORANDUM

To: Robert Law (de maximis)

From: Suzanne Replinger, Shannon Katka, Thai Do, Lisa Saban, and Mike Johns (Windward Environmental)

Subject: Response to USEPA proposed current conditions biota compositing plan

Date: November 25, 2019

This memorandum documents the Cooperating Parties Group's (CPG's) response to the US Environmental Protection Agency's (USEPA's) comments and suggested changes to the proposed compositing plan for fish and crab collected during the 2019 current conditions sampling effort.

USEPA's compositing plan differs from CPG's original proposal (dated October 17, 2019) in two key ways.

- ◆ First, for several species (American eel, bass, blue crab, and catfish), the target size ranges in USEPA's proposed tables have been slightly expanded to increase the number of possible composites by including specimens which are less than a 5% change in the target size range. However, in Area B, two eel that USEPA proposes to include are well outside of this range, so CPG has proposed an alternate plan.
 - ◆ Second, USEPA's compositing plan appears to prioritize making sure that all composites meet the 75% rule (i.e., the smallest individual in a composite is no less than 75% of the length of the largest individual (USEPA 2000)). While CPG agrees that this is an important guideline to consider, CPG has prioritized a key data use objective: to make composites more similar to one another and to keep fish caught in the same area together. This objective (i.e., comparability across composites) is critical, because these data will be used to monitor future changes in tissue concentrations at the site.
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Table 1 of this memorandum summarizes CPG's response on USEPA's proposed approach by species and area. Complete details are provided in the attached compositing tables.

Table 1. Summary of CPG response to USEPA proposed compositing plan

Species	Area A		Area B	
	No. of Comps	Notes	No. of Comps	Notes
American eel	7	USEPA slightly increased the size range. Assuming CPG's interpretation of an apparent error in the Excel table is correct, no alternate compositing plan is proposed.	11 (USEPA had proposed 12)	USEPA increased the size range for eel. CPG contends that the two largest eel that USEPA included (652 and 666 mm in length) stretch this range too far. Based on the data use objective of comparability across composites, CPG proposes an alternate revised compositing proposal for USEPA to consider (see Excel table).
Bass	12	USEPA slightly increased the size range. However, based on the data use objective of comparability across composites, CPG has made additional changes to the bass composites (see Excel table).	10	USEPA slightly increased the size range. However, based on the data use objective of comparability across composites, CPG has made an additional change to the bass composites (see Excel table).
Blue crab	12	USEPA slightly increased the size range. However, based on the data use objective of comparability across composites, CPG has made an additional change to the blue crab composites (see Excel table).	0	none (USEPA and CPG in agreement)
Catfish	6	none (USEPA and CPG in agreement)	3	USEPA slightly increased the size range. No alternate compositing plan is proposed.
Carp	12 (USEPA had proposed 15)	Adding the three additional composites is inconsistent with the target composite numbers called for in the approved QAPP addendum (Windward 2019). Carp were plentiful in both Area A and Area B (as were sunfish and white perch), thus CPG will process 12 composites.	12	none (USEPA and CPG in agreement)
Sunfish	12	none (USEPA and CPG in agreement)	12	none (USEPA and CPG in agreement)
White perch	12	none (USEPA and CPG in agreement)	12	none (USEPA and CPG in agreement)

CPG – Cooperating Parties Group

QAPP – quality assurance project plan

USEPA – US Environmental Protection Agency

This revised compositing plan would result in 133 total composites. As a reminder, the target number of composites to be collected during the 2020 portion of this sampling effort will depend on a statistical evaluation of the 2019 data to determine the number of samples needed for each species to achieve the target MDD (minimum detectable difference) of 50% (assuming 80% power and 95% confidence).

REFERENCES

USEPA. 2000. Guidance for assessing chemical contaminant data for use in fish advisories. Volume 1: Fish sampling and analysis. Third ed. EPA 823-B-00-007. US Environmental Protection Agency, Washington, DC.